

Application No. 10/009,452
Amendment dated May 4, 2005
Reply to Office Action of December 6, 2004

Amendments to the Drawings:

The attached 24 sheets of drawings, including FIGS. 1-4, 5A, 5B, 6A, 6B, and 7-26 are formal drawings, and replace the original 24 sheets including FIGS. 1-4, 5A, 5B, 6A, 6B, and 7-26.

These drawings are not believed to incorporate any changes other than improved quality.

Attachment: 24 Replacement Sheets

Application No. 10/009,452
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REMARKS/ARGUMENTS

Status of Application

Claims 1-27, 29-39, and 41- 56, and 58-62 are pending. Of originally filed claims 1-62, claims 1-47 and 56-58 were rejected over the prior art, and claims 48-55 and 59-62 were allowed.

As filed, claims 1, 9, 18, 23-26, 28, 31, 39-41, 48, and 56-59 were independent. Of the independent claims, Applicants have:

- canceled claims 28, 40, and 57;
- rewritten claims 9 and 23-26 so that they depend from claim 1;
- amended independent claims 1, 18, 31, 39, and 56; and
- eliminated paragraph lettering from claims 41 and 48.

Applicants have also amended dependent claims 3, 11, and 29.

Applicants gratefully acknowledge the allowance of claims 48-55 and 59-62. In view of the amendment to the claims and the remarks below, Applicants respectfully request reconsideration and withdrawal of the prior art rejections.

The Prior Art Rejections

Claims 1, 28-30, 39-40 and 56-58 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,184,282 issued to Kaneda et al. (Kaneda).

Claims 2-3, 5, 7, 9-17, 41-42 were rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda in view of common knowledge of the art.

Claims 4 and 6 were rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda in view of U.S. Patent No. 5,615,344 issued to Corder (Corder).

Claims 8 and 43-47 were rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda in view of U.S. Patent No. 5,611,055 issued to Krishan et al. (Krishan).

Claims 18-27 and 31-38 were rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda in view of U.S. Patent No. 5,928,347 issued to Jones (Jones).

Application No. 10/009,452
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Kaneda (U.S. Patent No. 5,184,282 to Kaneda et al.)

Kaneda discloses what is referred to as an IC card adapter that is configured to receive IC cards. Various IC card adapter embodiments receive IC cards in planes that are perpendicular or parallel to the plane of the IC card adapter. Kaneda further discloses providing a phone jack on the housing of the IC card adapter.

The Examiner cites Kaneda as teaching a removable expansion card for a portable host, and characterizes it as showing "I/O adapter circuitry for the I/O device (inherent in the serial to parallel conversion required to interface a telephone device with a computer). Applicants respectfully disagree with the Examiner in characterizing Kaneda as teaching an expansion module with I/O adapter circuitry.

While Kaneda does provide a phone connector 27 on the IC card adapter, Applicants respectfully submit that this connector, while arguably meeting Applicants' limitation of an I/O interconnect, falls far short of meeting Applicants' limitation of I/O adapter circuitry. The description of phone connector 27 at column 4, line 58 through column 5, line 4 reads as follows:

Opposite the third indicator 35, a means for connecting the adapter to a communication device connector 27 is provided. In this manner, the IC card adapter can be connected to a phone, telephone line or other communication device. *This means or connector 27 serves as a plug such that further communication devices or networks can be connected to the electronic device (such as the computer or printer) to which the IC card adapter is mechanically and electrically connected.* While this means or connector 27 is shown on the rear side of the housing 7", it should be understood that it can be located in any acceptable portion of the housing 7". Moreover, such a phone connector 27 could be provided in the first or second embodiments of the instant IC card adapter. (Emphasis added).

There is nothing in this passage, or elsewhere in Kaneda, to suggest that the IC card adapter serves as other than a pass-through mechanism for the signals presented to phone connector 27. Put another way, there is no disclosure or suggestion of providing I/O adapter circuitry in the IC card adapter.

Application No. 10/009,452
Amendment dated May 4, 2005
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Kaneda provides an interface to a host, such as a computer or printer, and allows IC cards to add functionality to the host. Accordingly, Kaneda allows the information on the IC cards to be communicated to the host.

Jones (U.S. Patent No. 5,928,347 issued to Jones)

Jones discloses a memory-card-based player/recorder, and as such includes connections and interfaces for memory cards, and further includes connections and interfaces for external devices, including external I/O devices. More broadly, Jones provides a universal memory card interface to couple memory cards to peripheral devices.

As best can be determined, Jones does not suggest that the memory-card-based player/recorder is configured to plug into a PDA or other portable host. To the contrary, Jones states, at column 3, lines 55-59:

It is therefore a general object of the invention to provide an apparatus that interfaces a removable memory card directly with a variety of rendering devices without the need for the memory card's native host device nor a host personal computer.

This is at odds with the claimed (first-level) expansion module that engages the PDA or portable host, and has a slot for accommodating a (second-level) expansion module (removable memory in some embodiments). Thus Jones teaches away from the present invention.

Amendment and/or Arguments with Respect to the Independent Claims

Claim 1

Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by Kaneda.

Claim 1 has been amended to broaden the recitations of the expansion module and the removable memory to that of first-level and second-level modules. This terminology is used in a number of other independent claims, as filed. Claim 1 continues to recite the (now first-level) module as having an I/O interconnect, I/O adapter circuitry, a (now second-level) interconnect, and (now second-level) adapter circuitry. For the reasons above, Applicants respectfully submit that Kaneda does not disclose or suggest the provision of I/O adapter circuitry.

Application No. 10/009,452
Amendment dated May 4, 2005
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Claim 1 has also been amended to recite that “wherein the first-level module has an opening sized and positioned to allow insertion of the second-level expansion module into the opening so as to engage the second-level interconnect while the first-level module is engaged with the portable host, and to allow withdrawal of the second-level expansion module from the opening so as to disengage from the second-level interconnect while the first-level module is engaged with the portable host.” While this limitation does not necessarily distinguish over Kaneda, it further distinguishes claim 1 from other prior art (e.g., U.S. Patent No. 6,053,748 to Bricaud et al.) where the second-level module cannot be inserted into or removed from the first-level module when the first-level module is engaged with the host.

Claim 9

Claim 9 was rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda. Applicants have amended claim 9 so it now depends from claim 1. Therefore, claim 9 is allowable for the reasons stated above with respect to claim 1.

Claim 18

Claim 18 was rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda in view of Jones.

Claim 18, drawn to a method of digitally encoded media playback, has been amended to more clearly recite the cooperation between the various interfaces of the expansion module, the PDA, and the removable memory. As mentioned above, the avowed purpose of Jones is to bypass a host computer, and so it is not seen how Jones can reasonably be combined with Kaneda, which provides an expansion module.

Claims 23-26

Claims 23-26 were rejected under 35 U.S.C. § 103(a) for obviousness over Kaneda in view of Jones. Applicants have amended claim 9 so it now depends from claim 1. Therefore, claim 9 is allowable for the reasons stated above with respect to claim 1 and further with respect to claim 18, where Applicants pointed out the lack of a suggestion to combine the teachings of Kaneda and Jones.

Application No. 10/009,452
Amendment dated May 4, 2005
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Claim 28

Claim 28, which was rejected under 35 U.S.C. § 102(b) as anticipated by Kaneda, has been canceled.

Claim 31

Claim 31 was rejected under 35 USC 103(a) for obviousness over Kaneda in view of Jones. Please see comments regarding claims 1 and 18.

Claims 39 and 40

Claims 39 and 40 were rejected under 35 U.S.C. § 102(b) as anticipated by Kaneda.

Claim 39 has been amended to better recite the particular structural relationships of the slot assembly. This structure, various aspects of which are shown in one or more of FIGS. 8-15, features the I/O connector 141 and the guide/connector assembly with contact fingers 180 cooperating as first and second partial bottoms of the slot. This feature is nowhere shown or suggested by Kaneda.

Claim 40 has been canceled.

Claim 41

Claim 41 was rejected under 35 USC 103(a) for obviousness over Kaneda.

Claim 41 recites, among other things, a first-level removable expansion module for a portable host that provides a first-level I/O interface for coupling with a first external I/O device, first-level I/O adapter circuitry for the first external I/O device, and second-level expansion adapter circuitry. The second-level expansion adapter circuitry is configured for coupling to a second-level expansion module having second-level I/O adapter circuitry for a second external I/O device. This is nowhere shown or suggested by Kaneda.

Claims 56 and 57

Claims 56 and 57 were rejected under 35 U.S.C. § 102(b) as anticipated by Kaneda.

Application No. 10/009,452
Amendment dated May 4, 2005
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Claim 56 recites various aspects of the expansion module slot assembly, and Applicants have amended claim 56 to improve readability. The comments in connection with claim 39 are relevant to claim 56.

Claim 57 has been canceled.

Claim 58

Claim 58 was rejected under 35 U.S.C. § 102(b) as anticipated by Kaneda.

Claim 58 is drawn to the top-cavity embodiment shown in FIGS. 16 and 17. Applicants respectfully submit that Kaneda does not show or suggest an expansion module with a lid having a recessed area for receiving a second-level expansion module in a flat stacked arrangement in such a way that the portable host maintains the second-level expansion contact in the recess and in contact with the contact fingers.

Dependent Claims

Applicants submit that the remaining independent claims are allowable for the reasons stated above. The dependent claims are by their terms narrower, and for that reason alone are also allowable.

Application No. 10/009,452
Amendment dated May 4, 2005
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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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